

CLAIMS

1. A product management system comprising a package for packing a product provided with a semiconductor device, and a reader/writer for reading and writing information stored in the semiconductor device,
5 wherein the semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna;
wherein the package is provided with a resonance circuit comprising an antenna coil and a capacitor; and
10 wherein the resonance circuit can communicate with the reader/writer and the semiconductor device.
2. The product management system according to Claim 1, wherein a communication method between the reader/writer and the resonance circuit is identical
15 to a communication method between the resonance circuit and the semiconductor device.
3. The product management system according to Claim 2, wherein the communication method is an electromagnetic induction method.
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4. The product management system according to Claim 1, wherein a communication method between the reader/writer and the resonance circuit is different from a communication method between the resonance circuit and the semiconductor device.
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5. The product management system according to Claim 4, wherein the communication method between the reader/writer and the resonance circuit is any one of an electromagnetic induction method and a microwave method.
- 30 6. A product management system comprising a package for packing a

product provided with an semiconductor device, and a reader/writer for reading and writing information stored in the semiconductor device,

wherein the semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna;

5 wherein the package is provided with a resonance circuit comprising an antenna coil and a capacitor;

wherein the resonance circuit can communicate with the reader/writer and the semiconductor device; and

10 wherein a communication range between the reader/writer and the resonance circuit is longer than a communication range between the resonance circuit and the semiconductor device.

7. The product management system according to Claim 6, wherein a communication method between the reader/writer and the resonance circuit is any one
15 of an electromagnetic induction method and a microwave method.

8. The product management system according to any one of Claims 1 and 6, wherein the semiconductor device is selected from the group of an ID tag, an ID chip, an ID label, an ID seal and an ID sticker.

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9. A method comprising:

sending at least one of a first signal comprising first information and a first electric power from a reader/writer to a resonance circuit,

25 sending at least one of a second signal comprising the first information and a second electric power from the resonance circuit to a semiconductor device in response to a receipt of said at least one of the first signal and the first electric power, wherein said semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna;

30 sending a third signal comprising second information from said semiconductor device to the resonance circuit in response to a receipt of said at least one of the second

signal and the second electric power by the semiconductor device

sending a forth signal comprising said second information from the resonance circuit to the reader/writer,

wherein the semiconductor device is attached to a product, the product is
5 contained in a package, the resonance circuit is attached to the package and the reader/writer is disposed outside of the package.

10. A method comprising:

sending at least one of a first signal comprising first information and a first
10 electric power from a reader/writer to a first resonance circuit,

sending at least one of a second signal comprising the first information and a second electric power from the first resonance circuit to a second resonance circuit in response to a receipt of said at least one of the first signal and the first electric power,

sending at least one of a third signal comprising the first information and a
15 third electric power from the second resonance circuit to a semiconductor device in response to a receipt of said at least one of the second signal and the second electric power, wherein said semiconductor device comprises a thin film integrated circuit comprising a thin film transistor, and an antenna;

sending a forth signal comprising second information from said semiconductor
20 device to the second resonance circuit in response to a receipt of said at least one of the third signal and the third electric power by the semiconductor device

sending a fifth signal comprising said second information from the second resonance circuit to the first resonance circuit,

sending a sixth signal comprising said second information from the first
25 resonance circuit to the reader/writer,

wherein the semiconductor device is attached to a product, the product is contained in a second package, the second resonance circuit is attached to the second package, the second package is contained in a first package, the first resonance circuit is attached to the first package, and the reader/writer is disposed outside of the first
30 package.

11. The method according to any one of Claims 9 and 10, wherein the semiconductor device is selected from the group of an ID tag, an ID chip, an ID label, an ID seal and an ID sticker.

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12. The method according to Claim 10, wherein the first package is selected from the group of a suitcase, a corrugated fiberboard, a container and a transporting vehicle.